

### Remarks

The Applicants acknowledge the withdrawal of the two prior rejections based on 35 USC §103.

The Applicants also note that the provisional non-statutory obviousness-type double-patenting rejection has been maintained. The Applicants respectfully request that further treatment of this rejection be held in abeyance pending an indication of allowability of the claims.

The Applicants have amended Claim 25 to recite that the martensite is "tempered" martensite, the amount of Cr is 15.7 to 18% and to incorporate the subject matter of Claim 49. Claim 49 has thus been cancelled. Additional support may be found in the Applicants' Specification on page 21 in paragraph [0058] and Table 1, Steel No. P, for example. Entry of those changes into the official file and consideration on the merits is respectfully requested.

Claims 25, 27-29, 31, 35, 36 and 48-50 stand rejected under 35 USC §103 over newly-cited JP '040. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying JP '040 against the claims. The Applicants nonetheless respectfully submit that JP '040 is inapplicable. Details are set forth below.

The rejection acknowledges that JP '040 fails to disclose that the stainless steel pipe is seamless. The Applicants agree. The rejection also recites that JP '040 does not disclose equations (1), (2), and (3). The Applicants agree. The rejection also acknowledges that JP '040 does not disclose that a residual austenite phase is present in an amount of 40% or less. Again, the Applicants agree. Although the Applicants disagree with the position that the first two items are obvious, the Applicants will address the issue with respect to the residual austenite phase, particularly how that austenite phase is present in conjunction with the claimed ferrite and tempered martensite.

The rejection specifically states that one skilled in the art would have expected the stainless steel pipe of JP '040 to inherently have "an amount of residual austenite as a result of the heating and cooling steps in the method of manufacturing the stainless steel pipe of JP '040." The Applicants respectfully submit that this is speculation not supported by JP '040 and actually contradicted by the Applicants' methodology. In that regard, the Applicants invite the Examiner's attention to the English translation of JP '040 beginning at paragraph [0037] which recites the JP '040 manufacturing method. That method involves forming steel slabs and hot rolling those steel slabs at a temperature between 1,100°C and 1,250°C. Then, the resulting hot rolled steel sheets may be annealed for "a short time" to adjust grain sizes. The annealed hot rolled sheets are then cut into a selected width so that the steel sheets can be formed into a pipe shape. The pipe shaped steel sheets are welded to form a welded steel pipe.

The Example in JP '040 beginning in paragraph [0042] confirms this basic process wherein steels were formed into ingots, then forged and, after forging, hot rolled sheets were formed at 1,100°C and 1,250°C. Tubes were then formed and welded. There are, however, no additional teachings or information that is provided with respect to the JP '040 methodology.

This is sharply contrasted to the detailed explanation of the Applicants' methodology beginning on page 19 of the Substitute Specification in paragraph [0054]. That description continues through paragraph [0059] wherein there are detailed discussions as to forming a seamless steel pipe and then particulars with respect to cooling the seamless steel pipe. Further, there is detailed disclosure with respect to quenching of the steel pipe and then a subsequent tempering treatment. There is still further discussion with respect to an alternative to the above-mentioned quenching and tempering treatment wherein a full tempering treatment is applied.

The Applicants therefore respectfully submit that JP '040 provides minimal discussions with respect to the methodology of producing the steel sheets which is contrary to the

Applicants' detailed discussion. The Applicants respectfully submit that one skilled in the art would really have no reasonable expectation of what the phases of the JP '040 steels would be given the lack of an enabling disclosure in that regard. This is particularly true given the fact that JP '040 utterly fails to mention the austenite phase other than in the context of the composition of the welding rods used to create the welded pipe. In other words, one skilled in the art would be left to guess the identification of the phases and their relative percentages.

On this basis alone, the Applicants respectfully submit that inherency has not been established under MPEP §2112. The Applicants note that the standard to establish inherency is quite high. Namely, that the claimed characteristics must "necessarily" be present in the prior art. It is not enough that the claimed characteristics might be present, could be present or would even likely be present. That does not meet the standard. The standard is that the claimed characteristic is "necessarily" present. The Applicants respectfully submit that JP '040 does not provide enough disclosure to allow one skilled in the art to conclude that the Applicants' claimed phases in their claimed percentages would "necessarily" be present.

Moreover, the Applicants specify that the amount of residual austenite in Claim 25 is about 4.1% to about 40%. In sharp contrast, paragraph [0033] of JP'040 discloses a two-phase structure of a ferrite phase and a martensitic phase with no disclosure of a residual austenite. Hence, the amount of residual austenite is 0% in JP'040.

In any event, the Applicants respectfully submit that there is no tempered martensite present in the JP '040 steels as claimed and as described in the Applicants' Specification in paragraph [0058]. This is because there is no tempering step in JP '040. Although there is an optional annealing treatment in JP '040, the Applicants respectfully submit that this is completely different from the Applicants' tempering treatment which is specifically calculated to form the microstructure containing a tempered martensite phase, a residual austenite phase and a

ferrite phase in the specified percentages. The Applicants therefore respectfully submit that JP '040 does not disclose a tempered martensite phase because the methodology of JP '040 is different, and that there is not an inherent presence of the Applicants' claimed tempered martensite phase because of those differences in methodology.

Further, range of Cr in Claim 25 is 15.7 to 18%. This is sharply contrasted to the Cr range of 11.5 to 15% disclosed in JP'040. Thus, this is yet another difference over JP'040.

Finally, while Claim 25 relates to a seamless pipe, JP'040 relates to welded pipes. Therefore, no strain is generated during cold working in the steel pipes of Claim 25. In sharp contrast, according to JP'040, a welded steel pipe is manufactured as disclosed in paragraph [0039] by processes wherein hot rolled sheet steel or steel plates are cut to almost the same width as a target steel pipe peripheral length, and the portion which is fabricated into a cylindrical shape is butt welded to obtain a welded steel pipe. However, because strain is generated therein during cold rolling, the welded steel pipe is disadvantageous to sulfide stress cracking. Thus, JP'040 is inapplicable. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is accordingly respectfully requested.

Respectfully submitted,



T. Daniel Christenbury  
Reg. No. 31,750  
Attorney for Applicants

TDC/vp/cs  
(215) 656-3381